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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,723	06/20/2003	Hsueh-Cheng Lin	252011-1190	5839

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EXAMINER

FLANDRO, RYAN M

ART UNIT PAPER NUMBER

3679

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,723

Applicant(s)

LIN ET AL.

Examiner

Ryan M Flandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-16, 19-21 and 24 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 17, 18, 22, 23 and 25-27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20030620.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 1, 4 and 12 are objected to because of the following informalities:
 - a. Claim 1. The term “rotating” in line 8 of the claim should be --rotatably-- for grammatical purposes;
 - b. Claim 4. In line 3 of the claim, the word --are-- should be inserted after “third through hole” and before “co-axially”; and
 - c. Claim 12. The term “deposed” in line 5 of the claim should be --disposed--.
 - d. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-16, 19, 20, 21 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Schwarzbich (US 6,585,447).
 - a. Claim 1. Schwarzbich shows and discloses a lock structure, comprising a first element 16,24 having a guide hole (inner surface of 24) and a first through hole (circumscribed by 58) located co-axially with the guide hole; a second element 12

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disposed under the first element **16,24** and having second through hole **22** aligned with the first through hole; a guiding element **18** rotat[ably] and movably disposed in the guide hole, wherein the guiding element **18** has a third through hole aligned with the first through hole; and a fixing pin **20** is inserted through the third through hole, the guide hole, the first through hole and the second through hole and having a first retaining portion (i.e. the bottom threads), wherein the first retaining portion is formed on the lower portion of the fixing pin **20** and located under the second element **12** (see figure 2).

b. Claim 2. Schwarzbich further shows the guide hole (inner surface of **24**) is circular and formed with inner threads (see figure 2).

c. Claim 3. Schwarzbich further shows the guiding element **18** is a hollow cylinder, and the outer surface the guiding element **18** is formed with outer threads, that engage the inner threads of the guide hole (see figure 2).

d. Claim 4. Schwarzbich further shows the cross sections of the first through hole, second through hole and third through hole [are] co-axially aligned with the cross section of the first retaining portion of the fixing pin **20**, and the first retaining portion pushes against the second element **12** when the fixing pin **20** rotates at an angle (see figure 2).

e. Claim 7. Schwarzbich further shows the guiding element **18** further comprises at least one second retaining portion (various protrusions formed on the inner surface of guiding element **18**) formed in the third through hole (see figure 2).

f. Claim 8. Schwarzbich further shows the fixing pin **20** further comprises a third retaining portion (i.e. threads on mid to upper portion of **20**) formed on an upper portion

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of the fixing pin 20, and the second retaining portion abuts the third retaining portion (see figure 2).

g. Claim 9. Schwarzbich further shows a first groove (a thread root) is formed on the third retaining portion (see figure 2).

h. Claim 10. Schwarzbich further shows a second groove (see annular groove portion between 34 and 40) is formed on the guiding element 18 (see figure 2).

i. Claim 11. Schwarzbich further shows the height of the guiding element 18 is smaller than that of the guide hole (see figure 2).

j. Claim 12. Schwarzbich shows a method for using a lock structure having a first element 16,24, a second element 12, a guiding element 18 and a fixing pin 20, the first element 16,24 having a guide hole (inner surface of 24) and a first through hole (circumscribed by 58) located under guide hole, the second element 12 [disposed] under the first element 16,24 and having a second through hole 22 corresponding to the first through hole, the guiding element 18 rotat[ably] and movably disposed in the guide hole and having third through hole corresponding to the first through hole, the fixing pin 20 having a first retaining portion (lower threads) formed on the lower portion of the fixing pin 20, comprising the steps of: (a) rotating the guiding element 18 to advance the guiding element 18 into the guide hole; (b) fitting the fixing pin 20 into the third through hole, guide hole, first through hole and second through hole 22 to locate the first retaining portion thereof under the second element 12; (c) rotating the fixing pin 20 by an angle in a first direction to rotate the first retaining portion thereof by the angle; and (d) rotating

the guiding element **18** to move the guiding element **18** in the guide hole until the first retaining portion of the fixing pin **20** abuts the second element **12** (see figure 2).

k. Claim 13. Schwarzbich further includes the steps of (e) rotating the guiding element **18** to move the guiding element **18** downward in the guide hole and separate the first retaining portion of the fixing pin **20** from the second element **12**; (f) rotating the fixing pin **20** by an angle in a second direction opposite the first direction to rotate the first retaining portion thereof by the angle; and (g) removing the fixing pin **20** from the third through hole, guide hole, first through hole and second through hole **22** to separate the first element **16,24** from the second element **12** (see figure 2).

l. Claim 14. Schwarzbich further shows the guide hole is circular and formed with inner threads (see figure 2).

m. Claim 15. Schwarzbich further shows the guiding element **18** is a hollow cylinder, and the outer surface of the guiding element **18** is formed with outer threads engaging the inner threads of the guide hole (see figure 2).

n. Claim 16. Schwarzbich further shows the cross sections of the first through hole, second through hole **22** and third through hole aligns with the cross section of the first retaining portion of the fixing pin **20** (see figure 2).

o. Claim 19. Schwarzbich further shows the guiding element **18** further comprises at least one second retaining portion (various protrusions formed on the inner surface of guiding element **18**) formed in the third through hole (see figure 2).

p. Claim 20. Schwarzbich further shows the fixing pin further comprises a third retaining portion (i.e. threads on mid to upper portion of **20**) formed on the upper portion

of the fixing pin 20, and the second retaining portion abuts the third retaining portion (see figure 2).

q. Claim 21. Schwarzbich further shows a first groove (a thread root) is formed on the third retaining portion (see figure 2).

r. Claim 24. Schwarzbich further shows a second groove (see annular groove portion between 34 and 40) is formed on the guiding element 18 (see figure 2).

Allowable Subject Matter

4. Claims 5, 6, 17, 18, 22, 23 and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

a. Claims 5, 6, 17 and 18 are indicated as being allowable because the prior art, including Schwarzbich, either alone or in combination, fails to disclose or teach the cross sections of the first retaining portion, first through hole, second through hole and third through hole being at least substantially rectangular.

b. Claims 22, 23 and 25-27 are indicated as being allowable because the prior art, including Schwarzbich, either alone or in combination, fails to teach or disclose the step of inserting a tool in the first groove of the third retaining portion to turn the fixing pin or inserting a tool in the second groove of the guiding element to turn the guiding element.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to lock structures that connect two plates or elements and raised floor arrangements in general:

U.S. Patent Publication 2004/0109724 A1 to Tiemann

U.S. Patent 6,772,564 to Leon

U.S. Patent 6,442,906 to Hwang

U.S. Patent 6,415,515 to Wheeler et al.

U.S. Patent 6,106,190 to Nakamura et al.

U.S. Patent 4,647,257 to Robishaw

U.S. Patent 4,277,923 to Rebentisch et al.

U.S. Patent 3,006,443 to Siler

U.S. Patent 2,883,012 to Hoffman

U.S. Patent 1,584,711 to Astrom

DE 3411285 A1

FR 2570769 A1 to Allaire et al.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952.

The examiner can normally be reached on 9:00am- 6:00pm Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RMF
September 3, 2004

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